

ABSTRACT

Metallurgical powder compositions are provided that include silicon carbide to enhance the strength, ductility, and machine-ability of the compacted and sintered parts made therefrom. The compositions generally contain a metal powder, such as an iron-based powder, that constitutes the major portion of the composition. A silicon carbide-containing powder is blended with the metal powder, preferably in the form of a silicon carbide powder. Optionally, common alloying powders, lubricants, binding agents, and other powder metallurgy additives can be blended into the metallurgical composition. The metallurgical powder composition is used by compacting it in a die cavity to produce a "green" compact that is then sintered, preferably at relatively high temperatures.